

Gentner's mission-bells is found at elevations between 600 and 4450 feet (ONHP 2000a). Over half of the known occurrences of Gentner's mission-bells are found at elevations higher than 2400 feet (ONHP 2000a). Those occurrences below elevation 2400 feet are localized in a central cluster within a 30-mile radius of the Jacksonville Cemetery. The remaining plants exist as single individuals or occasional clusters widely distributed across the area. Landownership varies from the BLM's Medford District, the city of Jacksonville, Southern Oregon University, District 8 of the Oregon State Department of Transportation, and private individuals. Gentner's mission-bells do not inhabit cultivated cropland.

The Oregon Natural Heritage Program database indicates the closest Gentner's mission-bells are approximately 5 miles southeast of the wasteway in Soda Mountain Wilderness near upper Dutch Oven Creek drainage. The database does not identify any plants within the proposed work area (ONHP 2000a).

The principle threat to Gentner's mission-bells is habitat loss caused by both fire suppression and urban development. Oak woodlands within the Rogue River Basin Project area are becoming more thickly wooded and less grassy due to fire suppression to protect the increasing number of homes. Residential development makes prescribed burning difficult. Records indicate natural fires occurred every 12-15 years and these frequent, low-intensity fires maintained the open canopy normally found within oak woodlands. The transformation from a grassy understory to a shrub understory, along with a dense, closed canopy, is excluding Gentner's mission-bells (USFWS 1999a). Urban development within this centralized area is destroying Gentner's mission-bells habitat at a rapid rate. (USFWS 1999a).

Environmental Consequences

Alternative 1 – No Action

There is no demonstrated or known presence of Gentner's mission-bells in the wasteway area nor does the wasteway area provide essential or suitable habitat for this species. Therefore, the No Action alternative would not affect this species.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

There is no demonstrated or known presence of Gentner's mission-bells in the wasteway area nor does the wasteway area provide essential or suitable habitat for this species. If any plants were found, Reclamation would avoid any activities that would negatively impact individuals and their habitats. The preferred alternative would, therefore, have no effect on this species.

Alternative 3 – Bioengineering Only

This alternative would result in similar effects as the preferred alternative. However, temporary and long-term sedimentation from the wasteway would be reduced even more than in the preferred alternative. There would be no effect on Gentner's mission-bells.

Alternative 4 – Standard Engineering Only

This alternative would have the greatest potential to alter habitats and create disturbance in the wasteway work area. However, as discussed under the preferred alternative, these actions would have no effect on Gentner's mission-bells.

Bald Eagle

Affected Environment

USFWS currently lists the bald eagle (*Haliaeetus leucocephalus*) as threatened in the 48 contiguous states. The historic distribution of bald eagles included most of the North American continent. The widespread use of organochloride pesticides contributed to a steep decline in reproduction from 1947 to 1970 (USFWS 1986). Habitat degradation, illegal harassment and disturbance, poisoning, and a reduced food base also contributed to the decline. By 1978, the bald eagle was federally listed as a threatened species in five states and as an endangered species in the remaining 43 states. USFWS (1986) approved a bald eagle recovery plan for the Pacific Recovery Region. Bald eagle populations have increased steadily since its ESA listing as threatened. The improvement is a direct result:

- of bans on DDT and other persistent organochloride pesticides
- habitat protection
- a growing public awareness of the bald eagles' plight.

Due to the overall population increase, USFWS (1995a) reclassified the bald eagle from endangered to threatened in the continental states. The number of bald eagles in the Pacific Recovery Region is five times what it was when the recovery plan was written (USFWS 1999b).

Bald eagles need suitable habitat and a prey base to thrive and reproduce. Suitable habitat includes, but is not limited to, large nesting and perching trees which are subject to minimal disturbance by humans, especially during the breeding season (January through mid-August). Eagles forage over large, open bodies of water by catching fish in their powerful talons or by stealing fish caught by Osprey. Their large size and long wingspan would make hunting in forest or dense woodlands difficult. Eagles prey primarily on fish, but will also consume birds, mammals, and carrion.

Two bald eagle nesting territories are in the vicinity of the proposed work area. One nest is approximately 2 miles southwest of Emigrant Lake and about 6 miles west of the wasteway. The other is situated close to the Hyatt Reservoir shoreline about 5 miles northeast of the wasteway. Both nests are closer to their respective reservoirs than to either the wasteway or Schoolhouse Creek. The large, open-water, fish-stocked Emigrant Lake and Hyatt Reservoir would attract eagles occupying these nesting territories. In recent years, both of these nesting territories have fledged eaglets (Isaacs and Anthony 2002).

Creeks within the proposed work area are relatively small and enclosed with canopy cover that makes it difficult for bald eagles to locate, pursue, and capture live prey.

Environmental Consequences

Alternative 1 – No Action

No bald eagle nests currently exist in the proposed work area. The habitat is unsuitable for this species' life history, making it unlikely a nesting territory would be established in the proposed work area. The only potential presence of bald eagles would be occasional migrants passing over the area. Continued sediments and nutrients from wasteway erosion may occasionally diminish water quality in Emigrant Lake, and in turn, may affect fish prey populations used by the resident nesting eagles and winter migrants. However, these occasional episodes are not likely to alter or limit the fish populations to a significant degree. This alternative would have no effect on bald eagles.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

No bald eagle nests currently exist in the proposed work area. The habitat is unsuitable for this species' life history, making it unlikely a nesting territory would be established in the proposed work area. The only potential presence may be from occasional migrants passing over the area.

Brief periods of increased turbidity have the potential to temporarily diminish water quality in the proposed work area if water is present. Work would be timed to occur when the wasteway is dry; however, rain, runoff, and emergency wasteway use cannot be predicted. If any of these events coincide with stabilization activities or access road construction, some sediments could be carried downstream to Emigrant Lake and temporarily affect prey fish populations.

Overall, the preferred alternative would result in a permanent reduction in wasteway sediments reaching Emigrant Lake. Therefore, this alternative would not affect bald eagles.

Alternative 3 – Bioengineering Only

Like the preferred alternative, this alternative would not affect bald eagles.

Alternative 4 – Standard Engineering Only

Like the preferred alternative, this alternative would not affect bald eagles.

Northern Spotted Owl

Affected Environment

USFWS listed the northern spotted owl (*Stix occidentalis caurina*) as threatened under ESA on July 23, 1990, and designated critical habitat in January 1992. Oregon lists this species as a State threatened species. The primary reason for the northern spotted owl population decline is loss and fragmentation of habitat due to timber harvest (USFWS 1995b). USFWS published guidelines in their Northwest Forest Plan adopted in 1994 for timberland management within the northern spotted owl range; however, a final northern spotted owl recovery plan has not been published.

Northern spotted owl habitat occurs in mountainous areas with old growth forest characterized by multilayered canopy and uneven-aged stands with overstory trees ranging in age from 230-600 years old (Marshall et al. 1996). The owls nest in cavities or on platforms created by abandoned raptor nests, squirrels nests, debris accumulations, and mistletoe brooms (Marshall et al. 1996). Northern spotted owls are primarily nocturnal predators of small mammals such as northern flying squirrels, woodrats, and red tree voles (Marshall et al. 1996, USFWS 1995b).

Over 150 northern spotted owl breeding territories exist near Rogue River Basin Project (ONHP 2000b). However, northern spotted owls do not forage on fish or other aquatic species that would attract them to project reservoirs nor do they depend on habitat provided by project facilities. Most of the breeding territories are above elevation 3500 feet in mature or old growth forest.

Two northern spotted owl critical habitat units (OR-37 and OR-38) occur within the Rogue River Basin Project area (Arnold 2001). One of these critical habitat units is near Hyatt Reservoir and Howard Prairie Lake under BLM management. The other is near Fish Lake under U.S. Forest Service management. Neither of these units falls within the wasteway work area. No northern spotted owl activity centers occur within 2 miles of the wasteway in any direction according to BLM Ashland Resource Area data on spotted owl activity centers (Arnold 2002).

Environmental Consequences

Alternative 1 – No Action

There is no suitable habitat for breeding or foraging for the spotted owl in the wasteway area. The only potential presence may be occasional migrants through the area. Continued sediments and nutrients from wasteway erosion may occasionally diminish the water quality. However, it is expected that these occasional episodes would not affect northern spotted owl populations.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

There is no suitable habitat for breeding or foraging for the spotted owl in the wasteway area. The only potential presence may be occasional migrants through the area. Construction of the access road and wasteway stabilization structures could temporarily increase turbidity of any water flowing through the wasteway during construction. The resulting sediments and nutrients may temporarily diminish the water quality. However, it is expected that neither this temporary episode or construction activities would affect this species.

There would be an overall permanent reduction of sediments and nutrients as a result of the preferred alternative. This alternative would reduce harmful effects but would have no effect on northern spotted owl populations.

Alternative 3 – Bioengineering Only

This alternative would result in similar effects as the preferred alternative. However, temporary and long-term wasteway sedimentation would be reduced even more than in the preferred alternative. There would be no effects on spotted owls.

Alternative 4 – Standard Engineering Only

This alternative would have the greatest potential to alter habitats and create disturbance in the wasteway work area. However, as discussed under the preferred alternative, these actions would have no effect on spotted owls. The temporary effects of construction would be overshadowed by the long-term benefits of reduced sedimentation and nutrients to the downstream and Emigrant Lake ecosystems. Therefore, as explained for the preferred alternative, this alternative would not affect spotted owls.

Southern Oregon/Northern California Coasts ESU Coho Salmon

Affected Environment

Coho salmon (*Oncorhynchus kisutch*) are anadromous and semelparous. Coho salmon spend approximately the first half of their life cycle rearing in streams and small freshwater tributaries. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean prior to returning to their stream of origin to spawn and die (NOAA Fisheries 2002).

NOAA Fisheries (1997) listed the SONCC ESU as threatened on May 6, 1997, due to the extreme population loss and then published a final rule (NOAA Fisheries 1999) effective June 4, 1999, designating critical habitat for SONCC ESU that includes Bear Creek and its tributaries downstream from Emigrant Dam. Emigrant Dam prevents passage of anadromous fish into upper Emigrant Creek, Tyler Creek, Schoolhouse Creek, and the wasteway. The effects of the preferred alternative would not continue downstream from the dam. Therefore, consultation on this species is not required.

Environmental Consequences

Since Emigrant Dam prevents passage of anadromous fish into river reaches upstream from the dam, there is no demonstrated or known presence of coho salmon in the wasteway area. Continued sediments and nutrients from wasteway erosion may occasionally diminish the water quality in Emigrant Lake. However, these occasional episodes would not alter the downstream coho salmon population. None of the four alternatives would affect coho salmon.

Species Comparison Table

Table 3-2 summarizes the effects the alternatives would likely have on the federally listed threatened or endangered species.

Table 3-2. ESA Species Effects				
	Alternative 1 No Action (baseline for comparison)	Alternative 2 Preferred Alternative Bioengineering Combined With Standard Engineering	Alternative 3 Bioengineering Only	Alternative 4 Standard Engineering Only
Gentner's mission-bells	no effect	no effect	no effect	no effect
Bald eagle	no effect	no effect	no effect	no effect
Northern spotted owl	no effect	no effect	no effect	no effect
Coho salmon	no effect	no effect	no effect	no effect

Cumulative Effects

The alternatives would have no effect on the four federally listed species. Cumulative effects are, therefore, not an issue.

Mitigation

None of the alternatives would be expected to adversely affect the four federally listed threatened and endangered species; therefore, no mitigation is needed.

Historic Properties

Affected Environment

Historic properties include prehistoric and historic archeological sites, buildings, and historically important places eligible for inclusion in the National Register of Historic Places. Historic properties are also places of special heritage value to contemporary communities (often, but not necessarily, Indian communities) because of their association with cultural practices or beliefs important in maintaining the cultural identity of that community.

Early Occupation of Southwest Oregon

Limited archeological evidence exists for occupation of southwestern Oregon prior to around 6,500 years before present (BP). Available evidence indicates populations from that time until about 2,250 BP were groups of highly mobile hunter-gatherers who moved with some seasonal regularity through a territory to obtain food and raw materials. Groups seem to have become less mobile through time, centering their seasonal movements around semi-permanent base camps and placing greater reliance on riverine resources. By 2,250 BP, groups seem to have maintained permanent villages from which members traveled to collect resources.

The Takelma, Molala, and Shasta tribes were living in southwestern Oregon by the time Euro-American's entered the area. Recent analysis suggests the Latkawa Takelma occupied much of the valley, while Shasta territory extended north only as far as modern Ashland. Since both tribes have place names and stories for Bear Creek valley locations, it is likely their territories overlapped in this area. Takelma and Shasta lifeways appear to have been broadly similar. Both lived in relatively permanent villages much of the year. These villages were located on terraces along principal rivers, often at the confluence of tributaries or near economically important resource locations. Small family groups traveled in a predictable pattern from those villages to various places from late spring to fall to obtain seasonally available food. Plant foods contributed the bulk of the daily diet, with acorns and camas being dietary staples. Fishing, especially for salmon, was a significant economic and social activity, although hunting supplemented the diet.

Euro-Americans first entered the area in 1826-1827. The Rogue River and Bear Creek valleys became a primary travel route between Oregon and California during the 1830s. Gold was discovered in 1851 near what became the city of Jacksonville, Oregon. Miners and other settlers flocked to the area bringing disease and driving the Indian people from their lands. The upper Rogue River Indian groups signed a treaty in 1853 establishing a reservation northwest of Medford. Attacks on the Indians in 1855 caused many to leave the reservation to fight. The fighting ended in 1856. The reservation was then abolished and the Indians who had survived disease and warfare were forced to relocate to reservations elsewhere in Oregon.

Existing Wasteway and Access Right-of-Way Conditions

The area of considerable erosion caused Reclamation to reroute released flows into a second natural intermittent stream channel which then returns the water to the original wasteway channel. This area is wooded, and fallen leaves and duff obscure the ground surface. Similar conditions are present along the wasteway channel upstream from the area of considerable erosion, while downstream, there is a mixture of wooded areas and open fields. Visibility is limited in all areas due to duff or grasses.

The first 1,000 feet of the access road right-of-way corridor crosses land that is used for agricultural purposes, and where no roadway presently exists. Grass (planted pasture or hay) is thick in this area. Schoolhouse Creek and several shallow, ephemeral surface drainages cross this segment of the right-of-way. The last 700 feet of the right-of-way corridor extend through woods where timber harvesting has occurred, and there is an abandoned roughly graded vehicle trail. Fallen leaves and duff obscure the ground in this wooded area.

Archeological Investigations

In October 2000, Reclamation contracted with Heritage Research Associates, Inc., (HRA) for an intensive pedestrian archeological survey of lands that would be impacted by the proposed project as defined at that time. In addition to the survey, HRA was to dig exploratory shovel probes in specified areas. The survey and exploratory probing methods and results are reported in HRA Report No. 238 (Oetting 2000), and are summarized below.

The archeological survey covered the area of considerable erosion and its access, including:

- the channel immediately upstream from the eroded area
- the eroded area, where stabilization would occur
- the second channel used to reroute released water around the area of considerable erosion
- the land between the two channels
- the entire right-of-way corridor for the access road

Survey methods used in the wasteway area varied depending upon ground conditions. The area between the two channels was surveyed at 10 meter (32 foot) intervals. Along the two channels, the survey extended 10 meters back from the bank, beyond the area that might be disturbed by either future erosion or bank stabilization actions. At both the wasteway channel upstream from the area of considerable erosion and at the rerouted channel, HRA surveyed with one archeologist walking in the channel examining the channel banks, while two archeologists surveyed the ground above the bank. At the area of considerable erosion, survey was confined to the ground beyond the eroding edge as it was unsafe to walk inside that section of the channel. The access road right-of-way corridor was walked at 5 meter (16 foot) intervals. One sparse scatter of prehistoric artifacts (later designated as site 35-JA-492) was identified during the survey.

Visibility was relatively poor (10 to 20 percent) throughout the survey areas due to thick grass or from leaf or duff cover. Reclamation's survey contract with HRA required that they dig exploratory shovel probes when there was poor surface visibility at locations where there might be construction disturbance. They were also required to probe a specific section of the access corridor parallel to a location where a landowner reported finding archeological material on his property about 150 feet outside of the road corridor. HRA excavated 15 site discovery shovel probes. Each was 30 cm (12 in) in diameter, was excavated in 10 cm (4 inch) levels, and all fill was screened through 1/8-inch mesh. HRA placed probes at the following locations:

- two along the wasteway where stabilization would occur
- two in the specified section of the access corridor parallel to the reported archeological site
- five where road culverts would be installed
- four at a location where environmental conditions indicated a site might be present but hidden by vegetation, and
- two near where the sparse artifact scatter (site 35-JA-492) had been recorded.

The probes identified two additional prehistoric material scatters (sites 35-JA-293 and 35-JA-494). All three recorded sites were located within the access road corridor on privately owned land. Further test excavations were needed to determine the character and physical integrity of the sites. In Oregon,

a State permit must be obtained before completing archeological test excavations on private land. Therefore, once HRA determined these locations were indeed archeological sites, they halted subsurface examination until a State permit could be obtained.

The State Historic Preservation Office (SHPO) issued a State permit (number AP-477) to HRA in June 2002 for test excavations, and HRA completed the test excavation the next week. Consistent with Reclamation's specification, test excavations were limited to the portion of each site located within the 60-foot-wide right-of-way corridor. The methods used and test excavation results are reported in HRA Report No. 258 (Oetting 2002). The following summarizes the site findings from all phases of investigation.

Site 35-JA-492 is a lithic scatter site located in the northern portion of the road access corridor. The site was discovered during the site survey, and two probes were excavated at that time, followed in 2002 by more extensive test excavation. A small quantity of waste flakes and two flaked stone tools were found scattered on the surface across a 25 by 30 meter area. The tools were a chert narrow-necked projectile point mid-section fragment, and a large basalt used flake. Enough remained of the point fragment to demonstrate that it was a narrow-necked style commonly used during the last 2,200 years. Test excavations yielded very little additional cultural material. Subsurface materials were largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. Except for the two tools noted on the surface, all materials found were unmodified chert, obsidian, or basalt flakes, and most were small interior specimens. No features were noted. The site was assessed to be a low-density surface artifact scatter with little potential to yield additional information.

Site 35-JA-493 is located on a small terrace. No surface material had been found at the site location during survey. However, since it seemed to be an area where a site might be expected to occur and the grass cover was very dense, HRA excavated two discovery probes to test subsurface soils. One of the probes yielded two flakes in the top 10 cm. The ground surface in that immediate area was then inspected on hands-and-knees, and a small number of additional flakes was found in small bare spots near a bedrock outcrop. Test excavations in 2002 indicated that, at least within the right-of-way, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The flakes were chert and obsidian, and most were interior specimens 1 to 2 cm in size. The two square nails do not appear to be associated with an identifiable early historic period feature within the right-of-way. The site appears to have been disturbed by plowing in the past. Site deposits within the right-of-way were assessed to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. It is possible that the tested area may represent the west edge of a larger site, but that area lies beyond the right-of-way corridor and Reclamation's proposed work area.

Site 35-JA-494 is located in the south half of the road corridor. No surface evidence of a site had been found during survey. However since this section parallels the archeological site reported about 150 feet outside the corridor, two discovery probes were excavated in the area. Both probes yielded interior flake specimens 1 to 2 cm in size. Intensive examination of the surface then occurred near the probes, but no additional materials were found. The grass is extremely dense in the area, with no bare spots. Extensive additional testing was completed in 2002. Testing revealed much more cultural

material, extending to a greater depth. However, again the material was essentially limited to unmodified lithic debitage – 236 flakes were recovered, one core, one biface fragment, and one animal bone fragment. There was no evidence of features, either prehistoric or historic period in origin. Also, the site appeared to be rather disturbed. Test units revealed mottled soils indicating that leveling or soil redistribution has occurred at the site. This interpretation is supported by discovery of a glass fragment between 10 and 20 cm below surface and a button between 30 and 40 cm below surface. Material density and distribution indicates that this site may extend well beyond the area tested within the right-of-way corridor. It is possible that those untested areas have historically significant deposits. However, it was determined that deposits within the right-of-way have limited physical integrity and lack the kind and variety of materials that could provide significant new information about area history or prehistory.

In September 2002, Reclamation initiated consultations with the SHPO and interested Indian tribes about the eligibility of site deposits within the right-of-way corridor for listing on the National Register of Historic Places (National Register). Tribes notified were the Cow Creek Band of the Umpqua Tribe of Indians, the Confederated Tribes of the Siletz Indians, the Klamath Tribes, and the Confederated Tribes of the Grand Ronde Community of Oregon (the Grand Ronde Tribes). On October 17, 2002, the SHPO indicated they concurred with Reclamation's determination that the deposits within the right-of-way were not eligible to the National Register. Attachment B contains a copy of this correspondence.

In a letter dated October 28, 2002, (attachment C) the Grand Ronde Tribes indicated they believe the sites were culturally significant, and that materials might be discovered during ground disturbing actions. They requested notification in the event of any discovery. No other tribe responded. Reclamation considered the Grand Ronde Tribes' response, and retained the determination that the site deposits within the right-of-way are not eligible to the National Register.

In June 2002 while completing the test excavations, HRA conducted an archeological survey of the wasteway downstream from the area of considerable erosion. The survey began near the confluence of the wasteway with Schoolhouse Creek and extended downstream to the confluence of Tyler Creek with Emigrant Creek. Within this reach, HRA examined an area extending approximately 100 feet to each side from the wasteway's centerline. HRA recorded three isolated finds (IF):

- a section of a wooden flume (IF-1)
- an artifact scatter (IF-2)
- an isolated artifact (IF-3).

IF-1 clearly lies beyond the potential work area and, therefore, will not be considered further in this EA. IF-2 consisted of four flakes and one fire-cracked rock scattered over a 10 by 20 meter area on a terrace about 5 meters from the creek bank. IF-3 was a single chert flake about 20 meters from the creek bank on a bench that appears to have been leveled and plowed in the past.

In June 2003, HRA conducted an archeological survey approximately 100 feet wide centered on the wasteway's centerline and upstream from the area of considerable erosion. No prehistoric sites or isolated finds were recorded, and there appears to be little likelihood of undetected prehistoric sites.

One scatter of 20th Century trash was found, consisting of sheet metal and a cable. It does not appear to be an historically significant site (Oetting 2003).

HRA also completed limited shovel testing at the locations of IF-2 and IF-3 by excavating a line of 50-cm-diameter test holes about 20 feet from the bank's edge. This indicated that archeological sites are present at both sites (Oetting 2003). Both sites are on private land; therefore in conformance with State law, the shovel testing was halted as soon as it was clear that archeological sites were present. Reclamation does not anticipate completing further investigations at these sites, since no ground disturbing actions are proposed in the area, and the creek appears to carry the flow without causing erosion.

Environmental Consequences

Alternative 1 – No Action

Continued wasteway channel erosion would have no effect on historic properties upstream from or within the area of considerable erosion, as no sites were found there. It appears unlikely that using the creek as a wasteway would impact IF-2 or IF-3 since no cultural material was visible in the streambank and the bank does not appear to be actively eroding at either site (Oetting 2003).

There would be no effect to the three archeological sites identified in the access road right-of-way since Reclamation would not construct the access road under the No Action alternative.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

Ground disturbing actions associated with wasteway bank stabilization in the area of considerable erosion or along the wasteway upstream from that area would have no effects on historic properties, as no sites were found in those sections of the wasteway.

Sites 35-JA-492 and 35-JA-493 both lie near areas where ground disturbance would occur during wasteway access construction. Associated excavation may extend into site deposits within the right-of-way. If construction excavation occurs within those sites, archeological deposits would be destroyed. Construction actions in the vicinity of 35-JA-494 would be limited to sinking several post holes to allow installation of a gate. Use of the unimproved access route would occur within the right-of-way across all three sites. Reclamation would drive over the unimproved ground surface only during dry-weather conditions as stipulated in the right-of-way agreement. Standard vehicles or farm equipment already drive over this land. Therefore, Reclamation's dry-weather use of the access would not cause further damage to the landscape or the resources on that land.

The National Historic Preservation Act holds Federal agencies accountable for impacts to historic properties that are eligible to the National Register. The portions of all three sites within the right-of-way corridor have been determined in consultation with the SHPO to be not eligible to the National Register. Therefore under National Historic Preservation Act, there is no effect to these sites from the

preferred alternative, even if damage occurs to site deposits within the corridor. Attachment B contains SHPO's concurrence with Reclamation's findings.

The creek channel in the vicinity of sites IF-2 and IF-3 is well incised and eroded to basal cobbles. It is stable and appears to have the capacity to carry flows without triggering bank erosion. No cultural features or materials were exposed in the banks. No further investigations are proposed at these site locations. Therefore, continued use of the creek channel as a wasteway appears unlikely to impact archeological deposits at IF-2 and IF-3.

Alternative 3 – Bioengineering Only

Impacts would be the same as for the preferred alternative (alternative 2).

Alternative 4 – Standard Engineering Only

Impacts would be the same as for the preferred alternative (alternative 2).

Cumulative Effects

The three archeological sites impacted by access improvements are located on private property. Two of the sites have clearly been used and appear to still be used for agricultural purposes (pasture and/or hay). The third site has had past timber harvest. The landowner retains the right under Reclamation's easement to personal use of the access road corridor. This might include grazing, harvesting crops, or driving the route with his own vehicles to access his land. These potential impacts would occur under all four alternatives. Preferred alternative actions taken to minimize potential impacts would also minimize cumulative effects.

Mitigation

No mitigation would be necessary for continued use of the wasteway or for stabilization under any of the action alternatives (2, 3, or 4). No historic properties were found near or upstream from the area of considerable erosion. Using the wasteway is not impacting deposits at IF-2 or IF-3 and is unlikely to do so in the reasonably foreseeable future.

No mitigation would be necessary for road access improvements or use, as the portions of the three archeological sites within the right-of-way corridor were determined to be not eligible to the National Register. However, Reclamation does commit to several actions with the objective of minimizing impacts to the site deposits. Minimizing efforts are appropriate because the deposits within the corridor are segments of larger sites and because the Grand Ronde Tribes indicated the sites have cultural significance for their tribe. Actions to minimize potential impacts are:

- monitor initial soil excavation at site 35-JA-493 to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations
- align the access road route across 35-JA-493 and across the west side of the right-of-way
- align the access road route across 35-JA-494 and across the east side of the right-of-way

If test excavations reveal that IF-2 or IF-3 is eligible to the National Register, and if on-going use of the wasteway channel is damaging those sites, Reclamation would use a stabilization method in that area to have the least impact to site deposits. If sites are found elsewhere along the channel, this same strategy would be applied. Determinations of eligibility, impact, and stabilization method would occur in consultation with the SHPO and interested tribes.

Reclamation would also comply with National Historic Preservation Act concerning discovery situations. If any archeological sites other than 35-JA-494, 35-JA-493, and 35-JA-494 were encountered during construction, work would halt immediately in the area of the find and a Reclamation archeologist would be notified. Also, if unanticipated deposits were found within the boundaries of the three recorded sites that appear to be of the quality to meet eligibility criteria for the National Register, work would also halt in that location and a Reclamation archeologist would be notified. Reclamation would make an initial assessment of the discovery, and if warranted, notify the SHPO and interested tribes and reinitiate site evaluation actions. Reclamation would also comply with requirements of State of Oregon burial laws if human remains were encountered. This would include an assessment of whether the remains are Indian or Euro-American in origin, and tribal notifications and consultations if they are of Indian origin.

Indian Sacred Sites

Affected Environment

Executive Order 13007 defines Indian sacred sites as “any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion.” The provisions of Executive Order 13007 apply only to Federal lands. More than half of the length of the wasteway is on private lands to which traditional practitioners have no access.

Environmental Consequences

Reclamation has not yet consulted with tribes on the potential for sacred sites being located on Federal lands within the proposed work area. Should any areas on Federal land be identified as needing wasteway stabilization, Reclamation would notify tribes and ask if they have any issues. At this time, Reclamation cannot determine if sacred sites would be affected.

Indian Trust Assets

Indian trust assets (ITA) are legal interests in property held in trust by the United States for Indian tribes or individuals. Examples of ITA's are lands, minerals, hunting and fishing rights, and water rights. The United States has trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or individuals by treaties, statutes, and executive orders. Reclamation policy is to

protect ITA's from adverse impacts of its programs and activities and to enable the Secretary of the Interior to fulfill responsibilities to Indian tribes.

Affected Environment

No Indian owned lands, federally recognized Indian reservations, or ceded lands have been identified within the work area where traditional use rights (such as hunting, fishing, and gathering) are retained by any federally recognized Indian tribe.

Environmental Consequences

None of the four alternatives would impact ITA's.

Cascade Siskiyou National Monument

President Clinton signed a proclamation June 9, 2000, creating the 52,947-acre Cascade Siskiyou National Monument in south central Oregon. BLM designated the area as an Ecological Emphasis Area in its 1994 Northwest Forest Plan and its 1995 Resource Management Plan because of the unique ecological and biological characteristics (Clinton 2002). A portion of the wasteway lies within the monument as shown on figures 1-2, 1-4, and 3-4.

The monument, 25 miles southeast of Medford along the Oregon/California border, includes Soda Mountain and surrounding lands at the intersection of three ecological regions: Coast, Klamath, and Eastern Cascade slopes. The designation protects the extraordinary ecological value of these regions and their associated flora and fauna from resource exploitation and habitat degradation. It also places a permanent timber harvesting moratorium on the area.

Species from each ecological region meet and mix in the diverse habitats provided by the area's unique combination of biological, geological, hydrological, climatological, and topographical features. The monument is home to a variety of rare species of plants and animals whose survival in this region depends upon its continued ecological integrity. The area supports an exceptionally high diversity of fauna, including one of the highest diversities of butterfly species in any area of the United States. The area also contains old-growth habitat crucial to the threatened Northern spotted owl.

The area contains both public Federal lands managed by BLM and numerous private land holdings. The Presidential proclamation gave BLM 3 years to develop a management plan for the area. The guiding principles for managing the monument are to protect, maintain, restore, and enhance relevant and important resources. BLM currently manages the monument under an interim management policy. Much of the private land has historically been managed for commercial purposes such as grazing and timber harvest (Boise Cascade 2002). Grazing continues while BLM studies whether continued livestock use is compatible with the protective purposes of the monument (Clinton 2002).

CASCADE SISKIYOU NATIONAL MONUMENT PUBLIC ACCESS MAP

R.2E. R.3E. R.4E.

Ashland

Emigrant Lake

Green Springs Powerplant

Green Springs Conduit

TH

TYLER CREEK WASTEWAY

Lincoln

Parsnip Lakes

Hobart Peak

Soda Mountain

Porcupine Mountain

Pilot Rock

Mariposa Botanical Area

Siskiyou Pass

Hyatt Reservoir

Chinquapin Mountain

Oregon Gulch RNA

Wilderness Study Area

Scotch Creek RNA

Copco Lake

OREGON

CALIFORNIA

Hilt

Motorized vehicles are restricted to designated roads.

Legend:

- BLM LANDS OUTSIDE MONUMENT
- BLM LANDS WITHIN MONUMENT
- LAKE
- CASCADE SISKIYOU NATIONAL MONUMENT BOUNDARY
- HIGHWAY
- PUBLIC ROAD
- PACIFIC CREST TRAIL
- STREAM
- CAMPGROUND
- TH PCT TRAILHEAD

Scale: 1:50,000

Source: USGS, 1998; USFS, 1998; BLM, 1998; NPS, 1998

Map Date: 10/15/18

Map By: USFS, 10/15/18

Environmental Consequences

Reclamation will continue cooperating with BLM to ensure its actions are in agreement with monument management goals. Any Reclamation actions would have the same environmental consequences whether within the monument or outside monument boundaries. Environmental consequences are therefore discussed under the headings of each specific natural resource (e.g. vegetation, water quality, etc.).

Cumulative Effects

Although the BLM management plan would apply only to the Federal lands within the monument, it raises numerous questions regarding the private lands within the monument; i.e., access, grazing, private forestry, and resulting social and economic impacts. It also raises concerns about increased wildfire risk to adjacent private lands from passive management of overstocked forests within the monument (Boise Cascade 2002). Jackson County Commission formed a citizen's advisory council which recommended substantially reducing the size of the monument in response to concerns of private property owners.

The preferred alternative would not add to the cumulative effects. Implementation of alternatives 2 (the preferred alternative) or 3 would be in agreement with BLM's management plan.

Mitigation

Mitigation discussion is under the headings of each specific natural resource (e.g. vegetation, water quality, etc.) since mitigation within the monument would be no different than outside monument boundaries.

Environmental Justice

The 1994 Presidential Executive Order 12898 (EO) mandates Federal agencies to identify and address any impacts their actions would have on environmental justice with regard to human health as well as social and economic issues. The EO identifies environmental justice as “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” The EO is designed to protect minority and low-income communities from discrimination of a disproportionately more hazardous or degraded human environment being imposed by a Federal action. It also emphasizes that Federal agencies provide minority and low-income communities with an opportunity for public participation and access to information relating to human health or the environment.

Affected Environment

The wasteway is in a rural and predominately white community (as shown in table 3-3) in Jackson County, Oregon. The county's population increased by 23.8 percent from 1990 to 2000. This growth rate is slightly higher than the State's overall population growth.

Table 3-3. 2000 Jackson County, Oregon, Census Statistics

U.S. Census Bureau 2000 Statistic	Jackson County	Oregon State
Total population	181,269	3,421,399
Population Percentage of Change (1990 to 2000)	23.8	20
White	91.6	86.6
Hispanic or Latino	6.7	8
American Indian or Alaska Native	1.1	1.3
Asian	0.9	3
Black or African American	0.4	1.6
Native Hawaiian or Pacific Islander	0.2	0.2
Other races	2.9	4.2
Persons below poverty	13.8	11.6
Children below poverty	20.3	16.3

The expanding human population along the wasteway has increased water usage. The number of property subdivisions and wells along the wasteway has increased since 1960. Human environmental consequences to the local area have also increased.

Environmental Consequences

None of the four alternatives would cause disproportionately adverse social, economic, or human health impacts to local minority or low-income populations, therefore, mitigation would not be required.